

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

Applicant: Mukerji et al.

Serial No.: 09/624,670

Filed: July 24, 2000

For: ELONGASE GENES AND USES
THEREOF

Case No.: 6407.US.P2

Examiner: Ramirez, D.

Group Art Unit: 1652

I hereby certify that this paper
(along with any paper referred to
as being attached or enclosed) is
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~~Washington, D.C. 20231~~

~~18 Box 452, Alexandria, VA 22314-0452~~

Date of Deposit:

Kimberly A. Jorio 5/1/03
Kimberly A. Jorio Date

DECLARATION UNDER 37 C.F.R. § 1.131

Assistant Commissioner for
Patents

~~Washington, D.C. 20231~~

~~18 Box 452, Alexandria, VA 22314-0452~~

Sir:

I, AMANDA E. LEONARD, a citizen of the United States
of America and resident of Gahanna, Ohio, do declare and
say that:

I am a co-inventor of the above-referenced application
for patent filed on July 24, 2000.

In the Office Action of December 17, 2002, claims 1-6,
8-9, 11-17, 19-22 and 47 are rejected under 35 U.S.C.
102(a) as being anticipated by Tyrdik et al. (J. Cell Biol.
149(3):707-717, May 2000; GenBank accession number
AF170908). Additionally, claims 10 and 15 are also

rejected under 35 U.S.C. 103(a) as being unpatentable over Tvrdik et al. (J. Cell. Biol. 149(3):707-717, May 2000; GenBank accession number AF170908). Further, claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tvrdik et al. (J. Cell Biol. 149(3):707-717, May 2000; GenBank accession number AF170908) in view of Lassner et al. (The Plant Cell 8:281-292, 1996).

I, along with my co-inventors, conceived and reduced to practice the invention claimed in claims 1-5, 8-24 and 47 prior to the publication date of the Tvrdik et al. reference, as evidenced by the following:

Attached Exhibit A illustrates that, prior to the May 2000 publication date of Tvrdik et al., I identified the nucleotide sequences of MELO4 and MELO7 as well as the encoded amino acid sequences of the proteins. I constructed two vectors (i.e., pFAE-84-4 and pFAE-87-4) using the cDNA sequence of MELO4 and cDNA sequence of MELO7, respectively, and cloned these two vectors.

Attached Exhibit B illustrates that, prior to the May 2000 publication date of Tvrdik et al., I transformed host cells (i.e., yeast cells) with the respective cloned vectors in order to express MELO4 and MELO7.

Attached Exhibit C illustrates that, prior to the May 2000 publication date of Tvrdik et al., I established the

elongase activity of both the MEL04 and MEL07 polypeptide sequences.

In summary, the attached Exhibits establish that the claimed invention was conceived of and reduced to practice, prior to the publication date of Tvrdik et al. (i.e., May 2000).

Although all the dates on Exhibits A-C have been blocked out, such dates are prior to May 2000, with the exception of the witnessing dates which are subsequent to May 2000.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant application or any patent issuing thereon.

Respectfully submitted,

By: Amanda E. Leonard
Amanda E. Leonard

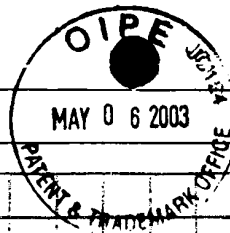
Date: _____



EXHIBIT A

PROJECT TITLE

Immunogenic Lipids



RECEIVED

MAY 08 2003

Continued from Notebook 3681

Cont'd

Ligate mm candidates into p4x242

4) mm4 (NcoI/DraI) + p4x242 (NcoI/HindIII)

6) mm6 (HindIII/NcoI) + "

7) mm7 (Ei/NcoI) + p4x242 (NcoI/EcoRI)

Transformation into Top10 cells (LB + Pen (200ug/ml))

TECH CENTER 1600/2900

Sub of gel

purified

2/28/03

Set up PCR to sequence pPRF-50-A2 & A3 (putative A24)

1) pPRF-50-A2 RO424

2) " RO425

3) " RO764

4) " RO766

5) " RO765

6) pPRF-50-A3 RO424

7) " RO425

8) " RO764

9) " RO766

10) " RO765

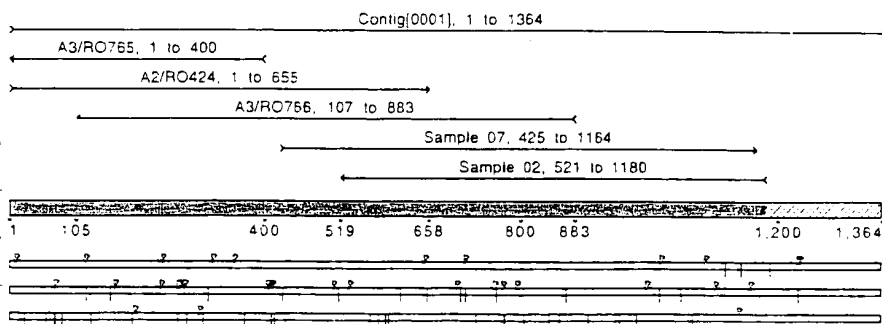
11) control

Is portion of the seq below good for either A2 or A3



Lane	File Name	Sample Name
1	Sample 01	A2/RO424
2	Sample 02	A2/RO425
3	Sample 03	A2/RO764
4	Sample 04	A2/RO766
5	Sample 05	A2/RO765
6	Sample 06	A3/RO424
7	Sample 07	A3/RO425
8	Sample 08	A3/RO764
9	Sample 09	
10	Sample 10	
11	Sample 11	A3/RO766
12	Sample 12	A3/RO765
13	Sample 13	CONTROL

Contig[0005]
Sequencher™ "Untitled Project"



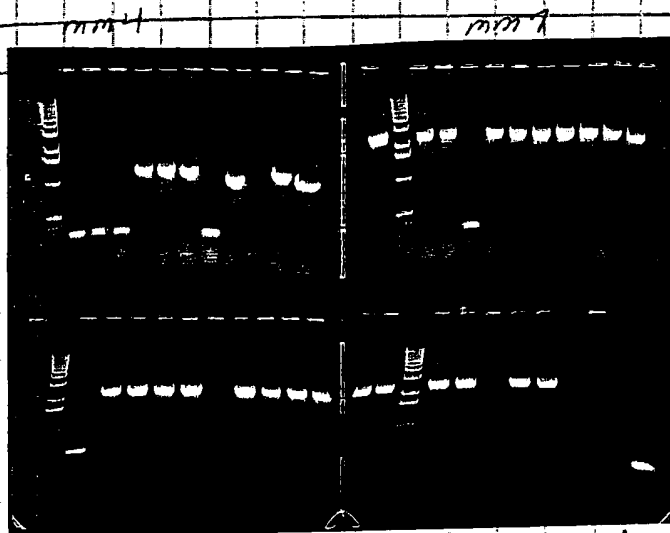
Project No.	Signature <i>Brandon E. Leonard</i>	Date
Witnessed By <i>Paul Johns</i>		Date

PROJECT TITLE Mutagenic Lipids

PCR screen for Δc from O/N plated colonies

Also PCR screen for mm4 & mm7 at R2424, 425

File # 100



screened 11 colonies for mm4 - pick all exp to grow o/n for mp

screened more for mm7 pick 1st 6 to grow o/n for mp

screened 11 for Δc - at R2793, R25 - no clones

also amplified cells from Q22 (mix) at R2793/5

CDNA-poly band ~1.5 Kb

~~PCR-84~~

PCR-84-4, 5, 6, 8, 10, 11 (p4x242(NcoI/HindIII) + mm4 R2519/R20

PCR-87-3, 4, 5, 6, 8, 9 (p4x242(BamI/EcoRI) + mm7 R2533/R2532

Start o/n cultures of PCR-84 & PCR-87 to mp

Cut mm7-A2 w/ EcoRI, 5', NcoI

load tot. vol 1/amp g total tot. vol
microsome # for vol microsome concentrate
ht treat

fill in mm5 7, 9a, 9b & 10, 100ul tot. vol ligate w/ PCR-Blunt
microsome concn concentrate down

ligate mm1-A2 2ul w/ p4x242 (NcoI/HindIII) ^{AEI}
(NcoI/EcoRI)

Transform into Top10 - also mm5 candidates in PCR-Blunt

Project No.	Signature <u>Amanda E. Leonard</u>	Date
Witnessed By <u>Paul Johns</u>		Date

MELO4 macv Translated Sequence 4:41 PM

407MM ADVN PETALANUKL Reference 17:1

Sequence Range: 1 to 1023

Project No.

Witnessed By

Signature

Signature
Amanda E. Leonard

Date _____

Date _____

mm4 - mouse brain marathon ready cDNA amplified by RT-PCR/520.
1.11 have been cloned into NotI/EcoRV cut p4/p343

cut of NC23/ Dr21. Shown in
 boxed, opened into NC2/HD2 cut p4x242.

744242 should have had AGCTT^A overhang.

but appears "A-G-C-T" was cleaved, leaving a

band 5' end. Most mean much of $p4 \times 24 = (N_{\text{new}} / N_{\text{old}}) \times 24$

UrdTH and is blunt since cloning was ~60%!.

small aeg. looks good

need to find human homologues

附件

A22

PROJECT TITLE

Isomeric Oil

100
 110
 120
 130
 140
 150
 160
 170
 180
 190
 200
 210
 220
 230
 240
 250
 260
 270
 280
 290
 300
 310
 320
 330
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 810
 820
 830
 840
 850
 860
 870
 880
 890
 900
 910
 920
 930
 940
 950
 960
 970
 980
 990
 1000

mnl6 -
 new brain DNA sequenced
 Cut N1203/11/1203 & cloned into p4K322 (N1203/11/1203)
 primer 830 must have created hairpin - no stop above
 it should be. might be folding differently due to new stop
 need to sequence other p4K322 clones to confirm whether
 any elongase activity present. Check above 2-11 (minous)
 by sequencing of 80 EC41 & 80425.
 Once find new clone, transform into 334.
 Also need to confirm HVEFH TITPN? or TITPN?
 might be mutation from cDNA amplification, or
 given in original EST seqs. (Human HSS say has TIT

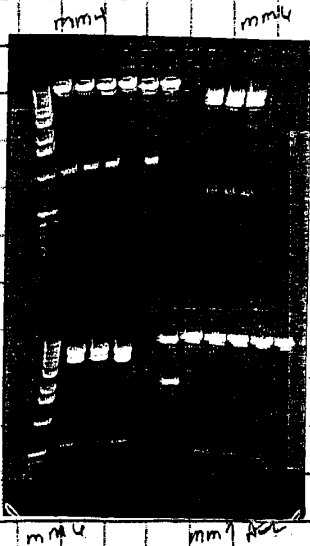
Project No.	Signature <i>Amanda E. Leonard</i>	Date
Witnessed By <i>Paul Johns</i>		Date

EXHIBIT B

PROJECT TITLE *Invasive Lipid*Amanda E. Leonard
08:10 AMTo: Emil G. Bobik/COLUMBUS/ROSS PRODUCTS DIVISION/US,
cc: Vic Huang/COLUMBUS/ROSS PRODUCTS DIVISION/US,
Subject: Sample descriptionsHi Emil,
Here's the list:

- | | | | |
|-----|----------------------|------|--------|
| 1) | 334(pRAE-80) | LA | 0.75ul |
| 2) | 334(pYX242) | LA | |
| 3) | 334(pRAE-80) | DGLA | 9.5ul |
| 4) | 334(pYX242) | DGLA | |
| 5) | 334(pRAE-80) | ADA | 8.3ul |
| 6) | 334(pYX242) | ADA | |
| 7) | 334(pRAE-80) | ALA | 3.5ul |
| 8) | 334(pYX242) | ALA | |
| 9) | 334(pRAE-80) | EPA | 30.2ul |
| 10) | 334(pYX242) | EPA | |
| 11) | 334(pRAE-80/pRAE-73) | ALA | |
| 12) | 334(pYX242/pYES2) | ALA | |
| 13) | 334(pRAE-80/pRAE-73) | LA | |
| 14) | 334(pYX242/pYES2) | LA | |
| 15) | 334(pRAE-80/pRAE-73) | STA | 6.9ul |
| 16) | 334(pYX242/pYES2) | STA | |

We're also interested in detecting delta4-desaturated 16:1 in all of the samples.

Thanks!
Amanda*Pellet yeast cultures &
submit for full profile
analysis**main prep just 16 of
cultures for pRAE-80,
80 & 87**Digest w/ enzymes to
confirm insert
Exp pRAE-80 - since
cloned ^{DNA} ~~insert~~ / vector cut
insert into ~~vector~~ / ~~vector~~
cut vector**cut pRAE-80**cut pRAE-84 (mmu) w/ XbaI - expecting ~9.4kb**cut pRAE-86 (mmu) w/ EcoRI/BstI - expecting ~10.5kb**cut pRAE-87 (mmu) w/ EcoRI - expecting ~15.5kb**order primers to sequence these
clones**transform into SC334**pRAE-84-4, pRAE-86-1 & pRAE-87-4**also streak 334(pYX242)**Need to check LA, PA, ADA, ALA, STA, EPA or DPA instead of R1A*

Project No.

Signature

Date

Witnessed By

Date

*Paul Johns**Amanda E. Leonard*



EXHIBIT C

COPIE
MAY 06 2003
PATENT & TRADE MARK

PROJECT TITLE

Transylvanian Oil

Fatty Acid Profile

[illegible]

Lipid Research Lab

Fatty Acid Profile

Name	334p(YX242)		334p(RAE-24-4)		334p(RAE-48-3)		334p(RAE-87-4)	
	GLA	GLA	GLA	GLA	GLA	GLA	GLA	GLA
Amanda Leonard	1	2	3	4				
mar93e9	LRL-8104	LRL-8109	LRL-8106	LRL-8107				
	0040101	0040201	0040301	0070401				
	grams/100 grams fatty acid							
C10:0	9.25	15.07	9.81	23.13				
C12:0	5.24	7.34	6.15	10.68				
C13:0								
C14:0	2.99	2.85	3.02	1.99				
C14:1	1.14	1.21	1.15	0.84				
C15:0	0.46	0.49	0.51	0.33				
C16:0	22.02	19.53	20.66	13.41				
C16:1w7	31.15	26.77	28.90	14.51				
C16:1w5	0.34	0.30	0.31	0.26				
C16:2								
C17:0	0.13	0.17	0.16	0.20				
C16:3								
C18:4								
C18:0	2.98	3.29	3.74	3.13				
C18:1w9	15.94	14.16	16.10	12.05				
C18:1w7	1.25	1.21	1.41	8.00				
C18:1w5	0.10	0.13	0.13	0.20				
C18:2w6	0.12	0.17	0.09					
C18:2w5				1.11				
C18:3w6	4.53	4.21	4.60					
C18:3w3								
C18:4w3								
C20:0	0.19	0.25	0.23	0.25				
C20:1w11				0.87				
C20:1w9	0.09		0.21	0.35				
C20:1w7			0.13	0.98				
C20:2w6								
C20:3w6	0.10	0.37	0.20	4.10				
C20:4w6								
C20:3w3								
C20:4w3								
C20:5w3								
C22:0	0.88	0.86	0.83	0.85				
C22:1w11								
C22:1w9	0.46	0.77	0.60	0.94				
C22:1w7								
C22:4w6								
C22:5w6								
C22:4w3								
C22:5w3								
C24:0	0.85	0.97	1.04	1.80				
C22:6w3								
C24:1w9								
C24:4w677								
C24:5w377								

Lipid Research Lab

Emil Bobik

3768-033.xls
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Project No.	Signature <i>Amanda E. Leonard</i>	Date
Witnessed By <i>Paul Johns</i>		Date

PROJECT TITLE

transgenic. Cell

Fatty Acid Profile

Aminda Leonard	334p(YX242)	334p(RAE 2L4)	334p(RAE 48-1)	334p(RAE 37-4)
	STA	STA	STA	STA
	6	6	7	6
mar92sep	LRL 5108 008F0061	LRL 5109 009F0051	LRL 5110 010F0101	LRL 5111 011F0081
		up/sample		
C10:0	19.30	14.80	15.62	25.49
C12:0	8.57	15.11	6.19	15.57
C13:0				
C14:0	3.46	12.87	3.21	4.89
C14:1	1.40	4.66	1.25	1.60
C15:0	0.62	2.28	0.60	0.69
C16:0	25.00	95.91	21.14	35.39
C16:1w7	33.71	165.79	28.84	43.96
C16:1w5	0.39	1.39	0.30	0.59
C16:2				
C17:0	0.23	0.42	0.28	0.28
C16:3		0.15		
C16:4				
C18:0	3.70	12.38	4.66	5.53
C18:1w7	16.38	77.53	17.80	31.04
C18:1w9	1.47	5.97	1.61	17.86
C18:1w5		0.71		0.45
C18:2w6				
C18:3w6				
C18:3w3				
C18:4w3	3.45	11.70	3.65	1.61
C20:0	0.33	0.50	0.33	0.20
C20:1w11				0.13
C20:1w9	0.26	0.64	0.48	0.73
C20:1w7		0.15	0.20	1.24
C20:2w6				
C20:3w6		0.21		
C20:4w6				
C20:3w3				
C20:4w3				
C20:5w3		1.91	0.32	6.80
C22:0	1.20	2.17	1.11	1.32
C22:1w11				
C22:1w9	1.03	1.21	1.07	1.12
C22:1w7				
C22:4w6				
C22:5w6				
C22:4w3		1.45		1.19
C22:5w3				
C24:0	1.60	2.87	1.45	2.30
C22:9w3				
C24:1w9				
C24:4w677				
C24:5w377				

Fatty Acid Profile

Amenda	33d(PY242)	33d(PRAE-84-J)	33d(PRAE-85-I)	33d(PRAE-87-A)
Leonard	8	9	7	8
	LRL-8108	LRL-8109	LRL-8110	LRL-8111
	008F0601	009F0601	010F0701	011F0801
			grams/100 grams fatty acid	
	C10:0	15.55	3.44	13.92
	C12:0	6.91	3.49	7.78
	C13:0			
	C14:0	2.80	2.93	2.86
	C14:1	1.13	1.08	1.11
	C15:0	0.50	0.53	0.54
	C16:0	20.14	22.17	18.83
	C16:1w7	27.15	36.32	25.69
	C16:1w5	0.31	0.32	0.26
	C16:2			
	C17:0	0.18	0.10	0.23
	C16:3		0.03	0.14
	C16:4			
	C18:0	2.98	2.86	4.33
	C18:1w7	14.81	17.92	15.95
	C18:1w9	1.19	1.36	1.44
	C18:1w5		0.16	0.22
	C18:2w6			
	C18:3w6			
	C18:3w3			
	C18:4w3	2.78	2.70	3.25
	C20:0	0.27	0.11	0.29
	C20:1w11			0.07
	C20:1w9	0.21	0.15	0.42
	C20:1w7		0.03	0.18
	C20:2w6			0.62
	C20:3w6		0.05	
	C20:4w6			
	C20:4w3			
	C20:5w3		0.44	0.28
	C22:0	0.97	0.50	0.99
	C22:1w11			
	C22:1w9	0.83	0.28	0.95
	C22:1w7			0.56
	C22:4w6			
	C22:5w6			
	C22:4w3		0.33	0.60
	C22:5w3			
	C24:0	1.29	0.66	1.29
	C22:6w3			1.15
	C24:1w9			
	C24:4w677			
	C24:5w377			
	total	100	100	100

Emil Babik
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Project No.	Signature <i>Lincoln E. Leonard</i>	Date
Witnessed By <i>Paul Johns</i>		Date

Fatty Acid Profile

Amend Leonard	334(PY242)	AA	AA	AA	334(PRAE-44-J)	334(PRAE-88-J)	334(PRAE-87-J)
	9	10	11	12			
LRL-8112	LRL-8113	LRL-8114	LRL-8115	LRL-8116	LRL-8117	LRL-8118	LRL-8119
012F0901	012F0901	012F0901	012F0901	012F0901	012F0901	012F0901	012F0901
mg/100g	mg/100g	mg/100g	mg/100g	mg/100g	mg/100g	mg/100g	mg/100g
C10:0	16.27	9.45	11.96	21.60			
C12:0	6.04	9.47	10.33	14.10			
C13:0							
C14:0	3.15	5.74	5.36	3.27			
C14:1	1.12	2.12	1.85	1.32			
C15:0	0.44	0.90	0.93	0.46			
C16:0	22.08	40.67	36.07	25.22			
C16:1w7	27.24	62.87	50.12	26.73			
C16:1w6	0.31	0.65	0.51	0.39			
C16:2							
C17:0	0.19	0.23	0.26	0.22			
C18:0							
C18:1	3.23	5.24	6.22	4.33			
C18:1w7	14.11	29.55	27.08	22.36			
C18:1w6	1.26	2.82	2.72	17.02			
C18:2w6		0.36	0.31	0.40			
C18:2w8							
C18:3w3							
C18:4w3							
C20:0	0.34	0.34	0.39	0.25			
C20:1w11							
C20:1w9	0.21	0.21	0.36	0.55			
C20:1w7			0.25	1.61			
C20:2w6							
C20:3w6							
C20:4w6	13.13	10.47	25.39	20.00			
C20:5w3							
C22:0	1.17	1.53	1.56	1.20			
C22:1w11							
C22:1w9	1.03	1.16	1.25	1.24			
C22:1w7							
C22:4w6		1.20	1.32	11.21			
C22:5w6							
C22:4w3							
C22:5w3							
C24:0	1.41	1.82	1.91	2.32			
C24:1w9							
C24:4w677		2.01	0.20				
C24:5w377							
Total	115	189	186	177			

Lipid Research Lab

Fatty Acid Profile

Amend Leonard	334(PY242)	AA	AA	AA	334(PRAE-44-J)	334(PRAE-88-J)	334(PRAE-87-J)
	9	10	11	12			
LRL-8112	LRL-8113	LRL-8114	LRL-8115	LRL-8116	LRL-8117	LRL-8118	LRL-8119
012F0901	012F0901	012F0901	012F0901	012F0901	012F0901	012F0901	012F0901
mg/100g	mg/100g	mg/100g	mg/100g	mg/100g	mg/100g	mg/100g	mg/100g
C10:0	14.18	5.01	6.42	12.18			
C12:0	7.01	5.02	5.54	7.95			
C13:0							
C14:0	2.75	3.04	2.86	1.84			
C14:1	0.98	1.12	0.99	0.75			
C15:0	0.38	0.48	0.50	0.26			
C16:0	19.25	21.57	19.36	14.22			
C16:1w7	23.75	33.23	26.90	15.08			
C16:1w6	0.27	0.34	0.28	0.22			
C16:2							
C17:0	0.16	0.12	0.14	0.13			
C18:0							
C18:1	2.82	2.78	3.34	2.44			
C18:1w7	12.30	15.67	14.53	12.81			
C18:1w9	1.10	1.50	1.46	9.60			
C18:1w5		0.19	0.17	0.22			
C18:2w6							
C18:2w8							
C18:3w3							
C18:4w3							
C20:0	0.29	0.18	0.21	0.14			
C20:1w11							
C20:1w9	0.18	0.11	0.19	0.31			
C20:1w7			0.13	0.91			
C20:2w6							
C20:3w6							
C20:4w6	11.44	5.55	13.63	11.28			
C20:5w3							
C22:0	1.02	0.81	0.84	0.68			
C22:1w11							
C22:1w9	0.89	0.61	0.67	0.70			
C22:1w7							
C22:4w6		0.84	0.71	6.33			
C22:5w6							
C22:4w3							
C22:5w3							
C24:0	1.23	0.97	1.03	1.31			
C24:1w9							
C24:4w677		1.07	0.10				
C24:5w377							
Total	100	100	100	100			

Lipid Research Lab

Project No.

Signature

Date

Witnessed By

Date

Thomson's Div

Fatty Acid Profile

Amazda Leonard	334D(7242)	EPA	EPA	334D(PAE 24-4)	334D(PAE 28-1)	EPA	EPA	334(PAE 27-4)
	13		14			16		16
ma08a00	LRL 5116 018P1301	LRL 5117 017P1401	LRL 5118 018P1501	LRL 5119 019P1601	LRL 5120 020P1701	LRL 5121 021P1801	LRL 5122 022P1901	LRL 5123 023P2001
C10:0	12.23	7.01	10.00	2.23				
C12:0	10.58	9.28	7.54	5.90				
C13:0								
C14:0	5.83	7.17	4.34	5.42				
C14:1	2.05	2.76	1.55	2.29				
C15:0	1.07	1.20	0.82	1.09				
C16:0	48.54	56.24	32.10	34.16				
C16:1w7	67.87	91.14	43.63	52.96				
C16:1w5	0.74	0.91	0.47	0.88				
C16:2								
C17:0	0.31	0.29	0.28	0.32				
C18:3								
C18:4								
C18:0	6.38	7.02	5.68	5.49				
C18:1w7	35.23	44.29	25.12	33.06				
C18:1w9	2.94	4.03	2.34	23.02				
C18:1w5	0.28	0.39	0.23	0.58				
C18:2w6	0.15	0.15						
C18:3w6								
C18:3w3								
C18:4w3								
C20:0	0.41	0.44	0.40	0.43				
C20:1w11								
C20:1w9	0.27	0.37	0.36	0.70				
C20:1w7		0.15	0.24	1.86				
C20:2w6								
C20:3w6								
C20:4w6								
C20:3w3		0.66		0.44				
C20:4w3								
C20:5w3	21.43	6.18	15.58	9.10				
C22:0	1.86	2.58	1.51	1.48				
C22:1w11								
C22:1w9	1.31	1.42	1.33	1.34				
C22:1w7								
C22:4w6								
C22:5w6								
C22:4w3								
C22:5w3		3.98	1.47	12.26				
C24:0	1.97	2.33	1.85	1.78				
C22:5w3								
C24:1w9								
C24:4w677		19.13	0.43	0.54				
C34:5w377								

Lipid Research Lab

Fatty Acid Profile

Amanda Leonard	334(p)Y2422	334(p)RAE 44-A	334(p)RAE 48-B	334(p)RAE 47-A
	13	14	16	16
mao9a26	LRL-8118 918P1301	LRL-8117 917P1401	LRL-8118 918P1601	LRL-8119 918P1601
		grams (g) grams fatty acid		
C10:0	5.52	2.58	6.36	1.12
C12:0	4.78	3.42	4.86	3.47
C13:0				
C14:0	2.63	2.64	2.76	2.73
C14:1	0.93	1.02	0.99	1.15
C15:0	0.48	0.44	0.52	0.55
C16:0	21.92	20.74	20.42	17.21
C16:1w7	30.85	33.62	27.76	26.68
C16:1w5	0.33	0.34	0.30	0.44
C16:2				
C17:0	0.14	0.11	0.18	0.16
C18:3				
C16:4				
C18:0	2.88	2.59	3.61	2.77
C18:1w7	15.91	16.33	15.98	16.66
C18:1w9	1.33	1.49	1.49	11.60
C18:1w5	0.13	0.14	0.15	0.29
C18:2w6	0.07	0.06		
C18:3w6				
C18:3w3				
C18:4w3				
C20:0	0.19	0.16	0.25	0.22
C20:1w11				0.10
C20:1w9	0.12	0.14	0.23	0.35
C20:1w7		0.05	0.15	0.94
C20:2w6				
C20:3w6				
C20:4w6		0.24		0.22
C20:3w3				
C20:4w3				
C20:5w3	9.68	3.02	9.92	4.58
C22:0	0.84	0.95	0.96	0.74
C22:1w11				
C22:1w9	0.59	0.52	0.84	0.67
C22:1w7				
C22:4w6				
C22:5w6				
C22:4w3				
C22:5w3				
C24:0	0.89	0.86	1.05	0.89
C22:6w3				
C24:1w9				
C24:4w6??				
C24:5w3??				

Lipid Research Lab

Emil Bobik

2 19

Project No.

Signature

Date _____

Witnessed By

Date _____

Fatty Acid Profile

Amide Leaved	334p-7X223		334pRAE 84-4		334pRAE 88-1		334pRAE 87-4	
	AD	17	ADA	18	ADA	19	ADA	20
ma03509	LRL-6170	LRL-8121	LRL-8122	LRL-8123				
	020F1761	021F1801	upsample	023F1901	023F2001			
C10 0	16.60	23.98	25.75	12.18				
C12 0	9.84	11.75	15.59	7.71				
C13 0								
C14 0	3.96	2.36	5.34	2.75				
C14 1	1.84	1.09	1.78	1.58				
C15 0	0.53	0.23	0.56	0.31				
C16 0	24.62	19.27	39.84	14.03				
C16 1w7	37.74	22.78	50.70	21.03				
C16 1w5	0.48	0.21	0.47	0.5				
C16 2								
C17 0	0.21	0.19	0.23	0.17				
C16 3								
C16 4								
C18 0	3.55	3.60	7.09	2.54				
C18 1w7	18.55	17.04	34.35	12.78				
C18 1w9	1.78	1.77	3.51	10.39				
C18 1w5			0.33	0.34				
C18 2w8								
C18 3w6								
C18 3w3								
C18 4w3								
C20 0	0.42	0.22	1.86	0.16				
C20 1w11				0.35				
C20 1w9	0.19	0.94		0.14				
C20 1w7		0.21	0.48	0.4C				
C20 2w6		0.47	0.60	0.74				
C20 3w6								
C20 4w6								
C20 3w3								
C20 4w3								
C20 5w3								
C22 0	1.64	1.18	1.69	1.04				
C22 1w11								
C22 1w9	1.34	1.41	1.52	1.32				
C22 1w7								
C22 4w6	32.17	35.25	51.29	24.78				
C22 5w6								
C22 4w3								
C22 5w3								
C24 0	1.98	1.82	2.50	1.94				
C22 6w3								
C24 1w9								
C24 4w677		3.58	0.78					
C24 5w377								
Total	158	148	246	117				

Lipid Research Lab

Fatty Acid Profile

Amade	324p(X242)	324p(RAE 24-4)	324p(RAE 24-4)	324p(RAE 27-4)
Leonard	ADA	ADA	ADA	ADA
	17	16	19	20
msd800				
	LRL 6150	LRL 6121	LRL 6122	LRL 6153
	020F1101	021F1001	021F1901	021F2001
			grams/lb	grams/lb
C10-0	10.53	16.05	10.46	10.39
C12-0	6.25	7.87	6.33	6.63
C13-0				
C14-0	2.51	1.58	2.17	2.35
C14-1	1.23	0.73	0.72	1.32
C15-0	0.33	0.15	0.23	0.26
C16-0	15.62	12.91	16.18	11.97
C16-1w7	23.94	15.26	20.59	17.95
C16-1w5	0.30	0.14	0.19	0.43
C16-2				
C17-0	0.13	0.12	0.09	0.15
C18-3				
C18-4				
C18-0	2.31	2.41	2.88	2.18
C18-1w7	11.77	11.41	13.95	10.91
C18-1w9	1.13	1.18	1.42	8.87
C18-1w5			0.13	0.29
C18-2w6				
C18-3w6				
C18-3w3				
C18-4w3				0.14
C20-0	0.26	0.15	0.76	0.25
C20-1w11		0.63		0.12
C20-1w9	0.12	0.14	0.19	0.34
C20-1w7		0.32	0.24	0.63
C20-2w6				
C20-3w6				
C20-4w6				
C20-3w3				
C20-4w3				
C20-5w3				
C22-0	1.04	0.77	0.69	0.88
C22-1w11				
C22-1w9	0.85	0.94	0.62	1.13
C22-1w7				
C22-4w6	20.41	23.61	20.83	21.15
C22-5w6				
C22-4w3				
C22-5w3				
C24-0	1.25	1.22	1.01	1.66
C22-5w3				
C24-1w9				
C24-4w677		2.40	0.32	
C24-5w377				
Total	100	100	100	100

Lipid Research Lab

Project No.	Signature <i>Brandon O. Leonard</i>	Date
Witnessed By <i>Paul Johns</i>		Date

PROJECT TITLE Transgenic Rat

Fatty Acid Profile

Ammonia	334(p)2242	334(p)RAE 84-4	334(p)RAE 85-1	334(p)RAE 87-4
Leonard	DPA	DPA	DPA	DPA
	21	22	23	24
	LRL-8124	LRL-8126	LRL-8128	LRL-8127
	024F2101	024F2201	024F2301	024F2401
	ug/g sample			
C10:0	14.07	14.16	13.41	19.80
C12:0	8.32	7.73	7.98	8.39
C13:0				
C14:0	3.33	3.33	3.71	1.22
C14:1	1.54	1.63	1.61	0.76
C15:0	0.48	0.46	0.58	
C16:0	23.77	21.57	23.57	8.63
C16:1w7	35.42	36.41	37.29	7.83
C16:1w5	0.40	0.42	0.42	0.14
C16:2				
C17:0	0.17	0.17	0.21	0.23
C18:0				
C18:1				
C18:2	3.69	3.69	4.90	5.62
C18:3	19.09	18.37	20.61	7.33
C18:4	1.74	1.73	2.10	6.27
C18:5			0.22	0.20
C18:6				
C18:7				
C18:8				
C18:9				
C18:10	0.30	0.29	0.37	0.28
C20:0				1.15
C20:1w11	0.17	0.19	0.39	0.37
C20:1w9			0.25	1.22
C20:2w6				
C20:3w3				
C20:4w3				
C20:5w3	1.22	1.20	1.37	0.92
C22:0				
C22:1w11	1.06	1.13	1.19	1.07
C22:1w9				
C22:2w7				
C22:3w3				
C22:4w6	0.72	0.71	0.93	1.26
C22:5w6				
C22:6w3				
C22:7w3	9.99	8.13	12.35	15.66
C24:0	1.44	1.49	1.72	2.28
C24:1w9				
C24:2w7				
C24:3w3				
C24:4w6				
C24:5w3				
C24:6w7				
C24:7w7				
C24:8w7				
C24:9w7				
C24:10w7				
C24:11w7				
C24:12w7				
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C24:38w7				
C24:39w7				
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C24:41w7				
C24:42w7				
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C24:45w7				
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C24:88w7				
C24:89w7				
C24:90w7				
C24:91w7				
C24:92w7				
C24:93w7				
C24:94w7				
C24:95w7				
C24:96w7				
C24:97w7				
C24:98w7				
C24:99w7				
C24:100w7				
total	127	126	136	91

Lipid Research Lab

Fatty Acid Profile

Ammonia	334(p)2242	334(p)RAE 84-4	334(p)RAE 85-1	334(p)RAE 87-4
Leonard	DPA	DPA	DPA	DPA
	21	22	23	24
	LRL-8124	LRL-8126	LRL-8128	LRL-8127
	024F2101	024F2201	024F2301	024F2401
	ug/g sample			
C10:0	11.09	11.27	9.85	21.79
C12:0	6.55	6.15	5.86	9.23
C13:0				
C14:0	2.63	2.65	2.73	1.34
C14:1	1.21	1.29	1.18	0.83
C15:0	0.39	0.36	0.42	
C16:0	18.73	17.17	17.31	9.49
C16:1w7	27.91	28.99	27.40	8.62
C16:1w5	0.32	0.33	0.31	0.16
C16:2				
C17:0	0.13	0.14	0.15	0.26
C18:0				
C18:1				
C18:2	2.90	2.94	3.60	6.19
C18:3	15.04	14.63	15.14	8.07
C18:4	1.37	1.38	1.55	6.90
C18:5			0.16	0.22
C18:6				
C18:7				
C18:8				
C18:9				
C18:10	0.23	0.23	0.27	0.31
C20:0				1.26
C20:1w11	0.13	0.15	0.29	0.41
C20:1w9			0.19	1.34
C20:2w6				
C20:3w3				
C20:4w3				
C20:5w3	0.96	0.96	1.01	1.01
C22:0				
C22:1w11	0.83	0.90	0.87	1.18
C22:1w9				
C22:2w7				
C22:3w3				
C22:4w6	0.57	0.57	0.68	1.39
C22:5w6				
C22:6w3				
C22:7w3	7.87	4.88	9.07	17.24
C24:0	1.13	1.19	1.26	2.51
C24:1w9				
C24:2w7				
C24:3w3				
C24:4w6				
C24:5w3				
C24:6w7				
C24:7w7				
C24:8w7				
C24:9w7				
C24:10w7				
C24:11w7				
C24:12w7				
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C24:40w7				
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C24:42w7				
C24:43w7				
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C24:69w7				
C24:70w7				
C24:71w7				
C24:72w7				
C24:73w7				
C24:74w7				
C24:75w7				
C24:76w7				
C24:77w7				
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C24:80w7				
C24:81w7				
C24:82w7				
C24:83w7				
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C24:86w7				
C24:87w7				
C24:88w7				
C24:89w7				
C24:90w7				
C24:91w7				
C24:92w7				
C24:93w7				
C24:94w7				
C24:95w7				
C24:96w7				
C24:97w7				
C24:98w7				
C24:99w7				
C24:100w7				
total	100	100	100	100

Lipid Research Lab

Project No.	Signature <i>Amanda E. Leonard</i>	Date
Witnessed By <i>Paul Johns</i>		Date